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Panels (P)

International Coordination of Space Exploration Activities (PEX.1)

THE EUROPEAN SPACE SCIENCES COMMITTEE ON INTERNATIONAL COORDINATION FOR SPACE EXPLORATION

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The European space sciences landscape is very diverse as it involves two major intergovernmental organisations (The European Space Agency-ESA- and the European Commission-EC) and more than 25 countries that each have their national institutional setting and scientific planning approach. It has therefore always been essential to coordinate space science and exploration programmes throughout Europe and with international partners.

The European Space Sciences Committee (ESSC - www.essc.esf.org) is offering European scientists an independent voice providing advice and guidance on space science matters to ESA, EC, national space agencies, and other stakeholders. The ESSC is not a programmatic nor a political entity; it promotes space science not as a cost but as a high-return investment with a broad and exciting leverage effect on the people and the economy.

Similarly to other international advisory bodies, ESSC offers recommendations and implements other space exploration related activities; it delivers direct consolidated (solicited or proactive) input from the scientific community to programmatic institutions; but it can also represent an anchor for non-European scientific communities to interact and collaborate.

The ESSC has thus kept and developed very strong links with the Space Studies Board of the US National Academies (NAS-SSB), members from both sides of the Atlantic thus affording regular insight on European and US space programmes. These two bodies are also linked in some strategic planning issues and in studies related to Planetary Protection (e.g. on Phobos-Deimos categorisation), Mars (Mars Special Regions), space weather or the icy moons of the giant planets. The ESSC has also tight contacts with Chinese, Russian and Japanese space agencies and research organisations.

This international bottom-up approach in space roadmapping has proven to be highly valuable in the past, a relevant example being the Cassini-Huygens mission. In the early eighties, the concept of a joint U.S.-European mission to explore the Saturnian system was delineated during

a joint European Science Foundation-US National Academies workshop, this was the spark of one of the most successful long-lived (2004-2017) planetary exploration missions to date.

A coordinated integrated position on programmatic space matters is key to maximise scientific return. Since the late nineties, the ESSC and its office have conducted studies and evaluations on the ESA Life and Physical Sciences in Space programme (ELIPS) as well as defining a Science-Driven Scenario for Space Exploration or roadmaps in the fields of human space exploration or astrobiology. ESSC has also been very active in providing inputs to the European Commission on the definition of its space strategy and space research work programme. The ESSC contacts with international bodies significantly contribute to the definition and implementation of exploration programmes in their respective countries and demonstrate that common initiatives allow us to promote the inputs from the scientific communities. A network of independent non-programmatic interdisciplinary bodies covering all the regions of the world would certainly improve coordination of space exploration at the global level.

References: all of the documents related to the aforementioned studies can be found at: <http://www.essc.esf.org/list-of-publications/>